

Form PTO-1449

INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 546322000321

Application Number 09/646,807

Applicant

Michael Wayne GRAHAM and Robert Norman RICE

Filing Date December 5, 2000

Group Art Unit 1636 1671

Mailing Date

November 16, 2004

## U.S. PATENT DOCUMENTS

| Examiner Initials | Ref. No. | Date       | Document No.       | Name              | Class | Subclass | Filing Date If Appropriate |
|-------------------|----------|------------|--------------------|-------------------|-------|----------|----------------------------|
| BW                | 1.       | 03/02/1993 | US 5,190,931       | Inouye            |       |          |                            |
| BW                | 2.       | 05/04/1993 | US 5,208,149       | Inouye            |       |          |                            |
| BW                | 3.       | 12/21/1993 | US 5,272,065       | Inouye et al.     |       |          |                            |
| BW                | 4.       | 09/04/2003 | US 2003/0165894 A1 | Waterhouse et al. |       |          |                            |

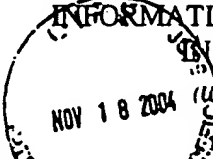
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| Examiner Initials | Ref. No. | Date       | Document No.  | Country   | Class | Subclass | Translation YES NO |
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|                   | 6.       | 06/14/1995 | EP 0465572B1  | EP        |       |          |                    |
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|                   | 8.       | 01/20/1994 | WO 94/01550   | WO        |       |          |                    |
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| <b>Form PTO-1449</b><br><b>INFORMATION DISCLOSURE CITATION</b><br><b>IN AN APPLICATION</b><br>(Use several sheets if necessary)<br> | Docket Number <b>546322000321</b>                               | Application Number <b>09/646,807</b> |
|  | Applicant<br><b>Michael Wayne GRAHAM and Robert Norman RICE</b> |                                      |
|  | Filing Date <b>December 5, 2000</b>                             | Group Art Unit <b>1636</b>           |
|  | Mailing Date <b>November 16, 2004</b>                           |                                      |

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Group Art Unit 1636

Mailing Date

November 12, 2004

BW

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|---|-----|---|--|
| Form PTO-1449<br><b>INFORMATION DISCLOSURE CITATION<br/>IN AN APPLICATION</b><br><i>(Use several sheets if necessary)</i><br><div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block; transform: rotate(-15deg);">           NOV 18 2004<br/>           PATENT &amp; TRADEMARK OFFICE         </div> |     | Docket Number <b>546322000321</b><br>Application Number <b>09/646,807</b><br>Applicant<br><b>Michael Wayne GRAHAM and Robert Norman RICE</b><br>Filing Date <b>December 5, 2000</b><br>Group Art Unit <b>1636</b><br>Mailing Date<br><b>November 18, 2004</b> |  |
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PTO/SB/08 (2-92)

Sheet 6 of 6

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EXAMINER: /Brian Whiteman/

DATE CONSIDERED:

06/20/2006

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ALTERNATIVE TO PTO/SB/08a/b (06-03)

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|--|---|----|---|--------------------------|-------------------|
| <b>Substitute for form 1449/PTO</b><br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |   |    |   | <b>Complete if Known</b> |                   |
|  |   |    |   | Application Number       | 09/646,807        |
|  |   |    |   | Filing Date              | December 5, 2000  |
|  |   |    |   | First Named Inventor     | Michael W. GRAHAM |
|  |   |    |   | Art Unit                 | 1836-1635         |
|  |   |    |   | Examiner Name            | D. Sullivan       |
| Sheet  | 1 | of | 1 | Attorney Docket Number   | 546322000321      |

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|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|                       |                          | Number-Kind Code <sup>2</sup> (if known) |                                |  |   |
| BW                    | AA                       | US 4,766,072                             | 08-23-1988                     | Jendrisak et al.                                   |   |
|                       | AB                       | US 2003/0056235 A1<br>with amendments    | 03-20-2003                     | Fire et al.  |   |
|                       | AC                       | US 2004/0064842 A1                       | 04-01-2004                     | Graham et al.                                      |   |
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|                       | AE                       | US 2003/0159161 A1                       | 08-21-2003                     | Graham et al.                                      |   |
|                       | AF                       | US 2004/0180439 A1                       | 09-16-2004                     | Graham et al.                                      |   |
| BW                    | AG                       | US 2004/0266005 A1                       | 12-30-2004                     | Graham et al.                                      |   |

| FOREIGN PATENT DOCUMENTS |            |  |                  |   |   |     |
|--------------------------|------------|--|------------------|---|---|-----|
| Examiner Initials*       | Cite No. 1 | Foreign Patent Document                          | Publication Date | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T 3 |
|                          |            | Country Code 3 -Number 4 -Kind Code 5 (if known) | MM-DD-YYYY       |   |   |     |
| BW                       | BA         | WO 97/44450                                      | 11-27-1997       |   |   |     |

\*EXAMINER: Initial if information considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

| NON PATENT LITERATURE DOCUMENTS |                          |   |                |
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| Examiner<br>Initials*           | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>3</sup> |
|                                 |                          |   |                |

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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

|                       |                  |                    |            |
|-----------------------|------------------|--------------------|------------|
| Examiner<br>Signature | /Brian Whiteman/ | Date<br>Considered | 06/20/2006 |
|-----------------------|------------------|--------------------|------------|

sf- 1849676



ALTERNATIVE TO PTO/SB/08a/b (05-03)

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|--|---|----|---|--------------------------|------------------------|
| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(Use as many sheets as necessary)</i> |   |    |   | <b>Complete If Known</b> |                        |
|  |   |    |   | Application Number       | 09/646,807             |
|  |   |    |   | Filing Date              | December 5, 2000       |
|  |   |    |   | First Named Inventor     | Michael W. GRAHAM      |
|  |   |    |   | Art Unit                 | 1636 167               |
|  |   |    |   | Examiner Name            | <del>D. Sullivan</del> |
| Sheet  | 1 | of | 1 | Attorney Docket Number   | 546322000321           |

| U.S. PATENT DOCUMENTS |                       |  |                             |   |   |
|-----------------------|-----------------------|--|-----------------------------|---|---|
| Examiner Initials*    | Cite No. <sup>1</sup> | Document Number                          | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|                       |                       | Number-Kind Code <sup>2</sup> (if known) |                             |   |   |
| BW                    | AA                    | US 5,578,716                             | 11-26-1996                  | Szyf et al.                                     |   |
| BW                    | AB                    | US 5,998,383                             | 12-07-1999                  | Wright et al.                                   |   |

| FOREIGN PATENT DOCUMENTS |                       |   |                             |   |   |                |
|--------------------------|-----------------------|---|-----------------------------|---|---|----------------|
| Examiner Initials*       | Cite No. <sup>1</sup> | Foreign Patent Document   | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T <sup>6</sup> |
|                          |                       | Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) |                             |   |   |                |
| BW                       | BA                    | WO 95/15378   | 06-08-1995                  |   |   |                |

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| NON PATENT LITERATURE DOCUMENTS |                       |   |  |  |  |                |
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| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |  |  |  | T <sup>2</sup> |
| BW                              | CA                    | Agrawal et al. (2000) "Antisense therapeutics: is it as simple as complementary base recognition?" Molecular Medicine Today 6: 72-81.   |  |  |  |                |
|                                 | CB                    | Cameron et al. (1994) "Multiple Domains in a Ribozyme Construct Confer Increased Suppressive Activity in Monkey Cells" Antisense Research and Development 4: 87-94.   |  |  |  |                |
|                                 | CC                    | Harborth et al. (2003) "Sequence, Chemical, and Structural Variation of Small Interfering RNAs and Short Hairpin RNAs and the Effect on Mammalian Gene Silencing" Antisense and Nucleic Acid Drug Development 13: 83-105.                                       |  |  |  |                |
|                                 | CD                    | Holen et al. (2002) "Positional effects of short interfering RNAs targeting the human coagulation trigger Tissue Factor" Nucleic Acids Research 30 (8): 1757-1766.  |  |  |  |                |
|                                 | CE                    | Jen et al. (2000) "Suppression of Gene Expression by Targeted Disruption of Messenger RNA: Available Options and Current Strategies" Stem Cells 18: 307-319.  |  |  |  |                |
|                                 | CF                    | McManus et al. (2002) "Gene Silencing using micro-RNA designed hairpins" RNA 8: 842-850.  |  |  |  |                |
|                                 | CG                    | McManus et al. (2002) "Small Interfering RNA-Mediated Gene Silencing in T Lymphocytes" Journal of Immunology 169: 5754-5760.  |  |  |  |                |
|                                 | CH                    | Opalinska et al. (2002) "Nucleic-Acid Therapeutics: Basic Principles and Recent Applications" Nature Reviews 1: 503-514.  |  |  |  |                |
| BW                              | CI                    | Randall et al. (2003) "Clearance of replicating hepatitis C virus replicon RNAs in cell culture by small interfering RNAs" PNAS 100 (1): 235-240.   |  |  |  |                |

\*EXAMINER: Initial if information considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

|                    |                  |                 |            |
|--------------------|------------------|-----------------|------------|
| Examiner Signature | /Brian Whiteman/ | Date Considered | 06/20/2006 |
|--------------------|------------------|-----------------|------------|

sf-1876554



Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

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|-------|---|----|---|------------------------|--------------|
| Sheet | 1 | of | 1 | Attorney Docket Number | 546322000321 |
|-------|---|----|---|------------------------|--------------|

**Complete If Known**

|                      |                   |
|----------------------|-------------------|
| Application Number   | 09/646,807        |
| Filing Date          | December 5, 2000  |
| First Named Inventor | Michael W. GRAHAM |
| Art Unit             | 1836 1635         |
| Examiner Name        | D. Sullivan       |

**U.S. PATENT DOCUMENTS**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
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|-----------------------|--------------------------|---|-----------------------------------|--|---|----------------|
|                       |                          | Country Code <sup>4</sup> -Number-Kind Code <sup>5</sup> (if known) |                                   |  |   |                |
| BW                    | 1.                       | WO-99/09045   | 02-25-1999                        | Somagenics, Inc.                                   |   |                |

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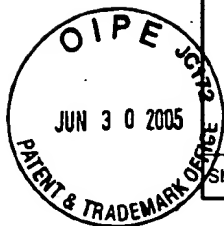
| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|-----------------------|--------------------------|---|----------------|
|                       | 2                        | <del>European Search Report mailed June 3, 2005, for European patent application no. 04015041, filed March 19, 1999, 4 pages</del>  |                |
| BW                    | 3.                       | BASS, Brenda L. (May 24, 2001) "RNA Interference: The Short Answer," Nature, 411:428-429  |                |
| BW                    | 4.                       | HARBORTH, Jens et al. (2001) "Identification of Essential Genes in Cultured Mammalian Cells Using Small Interfering RNAs," Journal of Cell Science, 114:4557-4565   |                |
| BW                    | 5.                       | MANCHE, Lisa et al. (Nov. 1992) "Interactions Between Double-Stranded RNA Regulators and the Protein Kinase DAI," Molecular and Cellular Biology, 12(11):5238-5248  |                |
| BW                    | 6.                       | PADDISON, Patrick J. et al. (July 2002) "RNA Interference: The New Somatic Cell Genetics?" Cancer Cell, 2:17-23   |                |

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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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| Examiner<br>Signature | /Brian Whiteman/ | Date<br>Considered | 06/20/2006 |
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| <b>SUPPLEMENTAL<br/>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |   | Application Number       | 09/646,807           |
|  |   | Filing Date              | December 5, 2000     |
|  |   | First Named Inventor     | Michael W. Graham    |
|  |   | Art Unit                 | 1635                 |
|  |   | Examiner Name            | Sean McGarry Whitman |
|  |   | Attorney Docket Number   | BENI/0022.P1         |
| Sheet  | 1 | of                       | 1                    |

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| Examiner<br>Initials *          | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
| BW                              | C1                       | Stam et al. (1997) "Post-transcriptional silencing of chalcone synthase in <i>Petunia</i> by inverted transgene repeats" The Plant Journal 12(1): 63-82   |                |
|                                 | <del>C2</del>            | <del>Australian Written Opinion for SG200205122-5, dated October 24, 2005 (BENI/0022-00)</del>  |                |
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| Examiner<br>Signature | /Brian Whiteman/ | Date<br>Considered | 06/20/2006 |
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This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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